1 2 3 4	Gary M. Hoffman (<i>Pro Hac Vice</i>) Kenneth W. Brothers (<i>Pro Hac Vice</i>) DICKSTEIN SHAPIRO LLP 1825 Eye Street, NW Washington, DC 20006-5403 Telephone: (202) 420-2200 Facsimile: (202) 420-2201				
5	Edward A. Meilman (<i>Pro Hac Vice</i>)				
6	DICKSTEIN SHAPIRO LLP				
7	New York, NY 10036-2714 Telephone: (212) 227-6500				
8	Facsimile: (212) 227-6501				
9	Jeffrey B. Demain, State Bar No. 126715				
10	Jonathan Weissglass, State Bar No. 185008 ALTSHULER, BERZON, NUSSBAUM, RUBIN & DEMAIN				
11	San Francisco, CA 94108				
12	Facsimile: (415) 362-8064				
	Attorneys for				
13	RICOH COMPANY, LTD.				
14	UNITED STATES DISTRICT COURT NORTHERN DISTRICT OF CALIFORNIA				
15	SAN FRANCISCO DIVISION				
16	DIGOLI COMPANIA I TR				
17	RICOH COMPANY, LTD.,)			
18	Plaintiff,) CASE NO. C-03-4669-MJJ (EMC)) CASE NO. C-03-2289 MJJ (EMC)			
19	VS.) RICOH'S OPPOSITION TO DEFENDANTS'			
20	AEROFLEX INCORPORATED, et al.,) NOTICE OF MOTION AND MOTION FOR SUMMARY JUDGMENT OF INVALIDITY			
21	Defendants	OF CLAIMS 13-17 OF U.S. PATENT NO. 4,922,432			
22	SYNOPSYS, INC.,)			
23	Plaintiff,) REDACTED PUBLIC VERSION			
24	VS.))) Date: September 26, 2006			
25	RICOH COMPANY, LTD.,) Time: 9:30 a.m.) Courtroom: 11, 19th Floor			
26	Defendant.) Judge: Martin J. Jenkins			
27		_)			
28	· · · · · · · · · · · · · · · · · · ·	ENDANTS' NOTICE OF MOTION AND			
۷٥	AND MOTION FOR SUMMARY JUDGMENT OF INVALIDITY OF CLAIMS 13-17 OF U.S. PATENT NO. 4,922,432 (No. 4)				

AND MOTION FOR SUMMARY JUDGMENT OF INVALIDITY OF CLAIMS 13-17 OF U.S. PATENT NO. 4,922,432 (No. 4) CASE NOS. CV-03-4669-MJJ (EMC) & CV-03-2289 MJJ (EMC)

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I. INTRODUCTION

It is hard to imagine any important aspect of this case for which the parties have no real dispute. The validity challenge brought by Synopsys and the ASIC Defendants (collectively referred to herein as "Defendants") based on a purported prior art system known as the "VLSI Design Automation Assistant (VDAA)," as raised in Defendants' Motion for Summary Judgment of Invalidity of Claims 13-17 of U.S. Patent No. 4,922,432 ("Defendants Motion" or "Defendants' Motion"), is no exception. While Defendants attempt to present a scenario in which the case can be simply resolved by a single claim interpretation issue ("hardware cells"), as we show below, substantial material facts remain at issue that put an end to that wishful thinking.

The VDAA system, and particularly the elements of proof (or lack thereof) relied upon to describe it, is a complex system for which the two main validity experts for the parties (Dr. Donald Soderman, for Ricoh; Dr. Tom M. Mitchell, for Defendants) can hardly agree on the details (and inferences to be drawn therefrom). Indeed, on a central issue to the Motion (and the case), i.e., whether the VDAA system selects "hardware cells," Defendants do not even agree with its *own* expert, Dr. Mitchell. If at any time summary judgment should be denied, it is where there is a reasonable conflict between experts, and particularly where there is a disagreement between the moving party and its own expert witness as to a central issue of fact underlying the motion. No clearer case of a genuine issue of fact can be found than here.

Thus, Defendants' Motion should be denied primarily because a plethora of material issues of fact remain irrespective of any interpretation of the claim term "hardware cells." The material factual disputes to be resolved between the parties (and apparently between Defendants and their own expert witness) include the scope and content of the purported prior art (i.e., the VDAA system), as well as whether the purported VDAA system, indeed, qualifies as "prior" art. Additionally, Defendants' Motion should be denied because it is based on a flawed interpretation of claims 13, 15 and 17.

II. COUNTERSTATEMENT OF FACTS

Despite assertions to the contrary in Defendants' Motion, there are a number of material facts that are in dispute, as will be discussed below and also in the "Argument" section of this Opposition.

A. Claim Construction of Term "Hardware Cells"

Defendants appear to primarily base this instant Motion on Defendants' restricted interpretation of the term "hardware cells," as discussed in detail in Defendants' Motion For Summary Judgment Of Non-Infringement (Hardware Cells) (No. 2). Defendants assert that the term "hardware cells" should be limited to the details of the preferred embodiment, in which Defendants contend, shows "hardware cells" that: must be in a one-to-one correspondence with a desired function of the ASIC under design; must be the entire circuit configuration (e.g., ripple carry adder) that performs the desired function; and cannot be a simple, basic Boolean logic gate ("primitive").

As evident from Ricoh's Opposition To Defendants' Notice Of Motion And Motion For Summary Judgment Of Non-Infringement (Hardware Cells),² which is incorporated herein by reference, Ricoh disputes Defendants' contentions regarding the term "hardware cells." The term "hardware cells," as indicated in the '432 patent, may include an entire circuit configuration that is used to perform a desired function (e.g., addition), but may also include portions of the circuit configuration, including one or more primitives. Ricoh takes the position that the usage of the term "hardware cell" in claim 13 encompasses the selection of multiple cells to be used to build a circuit configuration needed to perform a desired function.

¹ Defendants' Motion For Summary Judgment Of Non-Infringement (Hardware Cells) (No. 2) will hereinafter be referred to as "Defendants Motion (No. 2)."

² Ricoh's Opposition To Defendants' Notice Of Motion And Motion For Summary Judgment Of Non-Infringement (Hardware Cells) will hereinafter be referred to as "Ricoh's Opposition to Motion (No. 2)."

B. Other Claim Construction Issues

Although Defendants do not appear to emphasize this point, Defendants argue that the "flow" of the claimed process requires a definite order of claimed steps. Defendants Motion at 3. Ricoh disputes whether the claims are properly interpreted as to define any given order, and certainly disputes that the claimed steps must be performed in the order in which they are presented in the printed patent, as implied in Defendants' description. *Id*.

Defendants further contend that the Court in its Claims Construction Order implied that claim 13 *does* include the "data paths" and "control paths" specifically added in claims 15 and 17, respectively. Defendants Motion at 10. While the Court noted that "data paths" and "control paths" are the "types of interconnections disclosed in the patent's preferred embodiment," the Court made clear that it would *not* limit the claims in this case to the preferred embodiment or specific examples in the specification. (Brothers Dec. Ex. 28, Claim Construction Order at 24.)³ Indeed, the Court *expressly* found "that claim 13 does *not* restrict the interconnection requirements of the hardware cells to 'data and control paths." *Id.* (emphasis added).

C. The Kowalski References

Defendants principally rely on two references (hereinafter collectively referred to as the "Kowalski References") that are purported to describe the same theoretical system referred to as the "VLSI Design Automation Assistant (VDAA)": 1) a Ph.d dissertation ("Kowalski Thesis") (Defendants Motion Exhibit 35) written by one of Defendants' paid witnesses, Thaddeus J. Kowalski ("Dr. Kowalski"); and 2) an article ("Kowalski85") (Defendants Motion Exhibit 36) co-authored by Dr. Kowalski titled, "The VLSI Design Automation Assistant: From Algorithms to Silicon," published by the Institute of Electrical and Electronics Engineers (IEEE). The Kowalski Thesis relied upon in the

³ Ricoh's exhibits to all of their oppositions to the motions for summary judgment are attached to the September 1, 2006 declaration of Kenneth W. Brothers.

instant Motion has *never* been shown to be a published document that was "publicly accessible" prior to the invention of the '432 patent sufficient to be a "printed publication," as required under 35 U.S.C. § 102. *In re Cronyn*, 890 F.2d 1158, 1160 (Fed. Cir. 1989) (stating a thesis is not "accessible to the public" if it has not "been either cataloged or indexed in a meaningful way.").⁴ In addition, the arguments presented regarding the comparison of claims 13-17 to the Kowalski Thesis, as set forth in Claim Chart Exhibit A of the Defendants Motion, had never previously been disclosed.⁵

Defendants make reference throughout its Motion to an actual version of the VDAA system (allegedly) developed by Dr. Kowalski some time after receiving his doctorate degree. *See, e.g.*, Defendants Motion at 5. Although Defendants cite to certain related deposition testimony provided by Dr. Kowalski, Defendants have *never* shown that an actual VDAA system existed as "prior art" (i.e., publicly known, used, or sold prior to the invention of the '432 patent). No documents were produced or other witness testimony provided to corroborate the story of its paid witness, Dr. Kowalski. Indeed, although reference in Defendants' Motion was made to a "Claim Chart Exhibit C," purportedly showing how claims 13-17 of the '432 patent read on the actual VDAA system, no such claim chart was ever produced (or intended to be served) in connection with the Motion. *See* (Brothers Dec. Ex. 37, correspondence confirming that no Exhibit C (claim chart for (alleged) publicly used VDAA) was to be

⁴ Without more, the Kowalski Thesis is not admissible as prior art, and, thus, Defendants should not be allowed to rely on the Kowalski Thesis. *MEMC Elec. Materials, Inc. v. Mitsubishi Materials Silicon Corp.*, 2006 U.S. Dist. LEXIS 9353, *20 (N.D. Cal. Feb. 24, 2006) (summary judgment must be support by "facts as would be admissible in evidence.").

⁵ Although a "claim chart" reading the claims onto the Kowalski Thesis had been presented as part of Defendants' Final Invalidity Contentions ("FICs"), the substance of the newly presented Claim Chart Exhibit A is substantially different than the original chart contained in the FICs. In addition, although Defendants' validity expert witness, Dr. Mitchell, in his written report ("the Mitchell Report") relied on what was purported to be a "published" version of the Kowalski Thesis, the "published" version was only relied upon to meet the "describing" and "specifying" limitation. The Mitchell Report did not rely (in any way) on what is referred to in the Defendants Motion (and herein) as "the Kowalski Thesis" to assert invalidity of any portion of claims 13-17 of the '432 patent. Thus, Defendants' reliance now on the Claim Chart Exhibit A should be prohibited. Fed. R. Civ. P. 37(c); *MEMC Elec.*, 2006 U.S. Dist. LEXIS 9353, *20 (summary judgment must be support by "facts as would be admissible in evidence.").

served with the Motion for Summary Judgment.) Because Defendants have *never* produced any evidence to support the contention that an actual VDAA system was publicly known or used prior to the invention of the '432 patent (nor the details thereof), any reliance at this late stage, particularly in connection with the instant Motion should be prohibited. Fed. R. Civ. P. 37(c); *MEMC Elec.*, 2006 U.S. Dist. LEXIS 9353, *20 (summary judgment must be support by "facts as would be admissible in evidence.").

Similarly, Defendants rely solely on the oral testimony of its paid witness, Dr. Kowalski, to redefine the teachings of the Kowalski References.⁶ Defendants, for example, rely on testimony of Dr. Kowalski to "clarify" that a component known as a "technology-sensitive database" contains primitives despite the fact that the Kowalski References *never* disclose (or even suggest) that primitives would be stored in the database. As Defendants had not previously disclosed or relied upon this alleged "clarification," any reliance at this late stage should also be prohibited. Fed. R. Civ. P. 37(c); *MEMC Elec.*, 2006 U.S. Dist. LEXIS 9353, *20 (summary judgment must be support by "facts as would be admissible in evidence.").

D. <u>VDAA System Described in the Kowalski References</u>

A comparison of the opinions held by the party experts (Dr. Tom M. Mitchell, for Defendants; and Dr. Donald Soderman, for Ricoh)⁷ regarding the Kowalski References, shows there is little agreement between the experts regarding the Kowalski References. Dr. Mitchell (Brothers Dec.

⁶ The Federal Circuit warns against reliance on allegations supported solely by biased witness testimony. *Juicy Whip v. Orange Bang*, 292 F.3d 728, 740 (Fed. Cir. 2002) ("Witnesses whose memories are prodded by the eagerness of interested parties to elicit testimony favorable to themselves are not usually to be depended upon for accurate information.").

⁷ Cf. (Brothers Dec. Ex. 34, Expert Report of Tom M. Mitchell ("Mitchell Report") at 24-31) with (Brothers Dec. Ex. 31, Ricoh's Written Report Of Donald Soderman In Rebuttal To Reports Of Kowalski, Mitchell and Van Horn ("Soderman Rebuttal Report") at 18-21).

Ex. 34, Mitchell Report at 24-25.), for example, summarized the VDAA system described in the Kowalski References as follows:

The VLSI Design Automation Assistant (VDAA) [exhibit 15, Kowalski85c], allowed a user to input an architecture-independent description of a desired function in an algorithmic language called ISPS. . . . The first step used a software module called DAA, a rule-based expert system which captured expert design knowledge about how to implement the actions and conditions described in ISPS, using a set of modules such as registers and primitive operations. As further depicted in Figure 1, the "technology-independent hardware network" produced by DAA was then refined by the "module binder" to produce a "technology-dependent hardware network" which was further refined by the "control allocator" to produce a technology-dependent hardware network including necessary control signals.

In contrast, Dr. Soderman (Brothers Dec. Ex. 31, Soderman Rebuttal Report at 19.), summarized the VDAA system as described in the Kowalski References follows:

The VDAA system inputs an algorithmic description in a programming language known as "ISP." The VDAA system transforms the algorithmic description into a network of functional modules (e.g., registers, adders, multiplexers) using expert knowledge. An algorithmic program known as the "module binder" is used to implement the modules specified by the DAA system from components in a target technology. [Kowalski85c] at 34-35.

As emphasized by Dr. Soderman, the VDAA system, as described in Kowalski85, contains expert rules for use in the formulation or selection of architecture structures (referred to as "modules"). (Brothers Dec. Ex. 31, Soderman Rebuttal Report at 19.) The "modules," which are selected from a component referred to as a "technology-sensitive database," however, are technology-independent structures. *Id.* Dr. Mitchell is forced to agree with this: "The DAA produces a technology-independent hardware network. This network is composed of modules, ports, links, and symbolic code. The modules can be registers, operators, memories, and buses or MUXes with input, output, and bidirectional ports." (Brothers Dec. Ex. 34, Mitchell Report at 28 (quoting from Kowalski85 at 36).) Indeed, Dr. Mitchell identifies as meeting the "hardware cell" library (used in the "storing data

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describing . . . hardware cells" step of claim 13 of the '432 patent) an element disclosed in the Kowalski References as the "module database." (Brothers Dec. Ex. 34, Mitchell Report at 28.)

This concession by Dr. Mitchell is critical in that the only "expert rules" found in the Kowalski References, thus, select (from the so-called "technology-sensitive database") a technologyindependent functional module. According to Dr. Soderman, this use of "expert rules" does not result in a selection of "hardware cells," as that term is properly understood by those of ordinary skill in the art.8 (Brothers Dec. Ex. 31, Soderman Rebuttal Report at 19-20.) The Mitchell Report cites no evidence that the VDAA system stores such "hardware cells" in the "technology-sensitive database."

In fact, in *direct contrast* to the position Defendants *now* take in the instant Motion, Dr. Mitchell never identifies the "technology-sensitive database" as containing "hardware cells," instead relying on the "module database" disclosed in the Kowalski References to supply the "hardware cells" used in the "cell selection" process. Cf. Defendants Motion at 5 ("[T]he nodes in the VT representation were used to select hardware cells from the 'technology-sensitive database' using expert rules stored in the VDAA system."); and Defendants Motion at 9 ("Specifically, the VDAA, a knowledge based-expert system, applies a set of rules to each of the definitions to select a module. The VDAA modules are 'hardware cells,' and these modules are selected by rules.").9 Thus, the factual disputes regarding the

⁸ Indeed, as described in more detail in Ricoh's Opposition to Motion (No. 2), the term "hardware cells," as used in claim 13, requires a representation of technology-specific hardware components.

⁹ In relying on the Kowalski References, Defendants have not previously read the claimed "hardware cells" to be the modules selected from the "technology-sensitive database." The claim chart included with Defendants FICs for the Kowalski Thesis (Brothers Dec. Ex. 35, FIC Exhibit 16.) discussed the use of "target technologies" and made no mention whatsoever of a "technology-sensitive database." Similarly, the claim chart for Kowalski85 (Brothers Dec. Ex. 36, FIC Exhibit 17.) quoted passages regarding both the "technology-sensitive database" and the "module database," where the passage regarding the "module database" discussed the selection of "cells." Subsequent to the production of the FICs, Dr. Mitchell issued the Mitchell Report opining that the "hardware cells" were found in the "module database," not the "technology-sensitive database." (Brothers Dec. Ex. 34, Mitchell Report at 28.) Defendants should be prohibited from now relying on a position (i.e., the (alleged) presence of "hardware cells" in the "technology-sensitive database") not previously disclosed. Fed. R. Civ. P. 37(c);

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Kowalski References do not appear to be limited to the disagreement between Defendants and Ricoh expert witnesses, but *also* appear to exist between Defendants and their *own* validity expert witness, Dr. Mitchell.

Clearly in dispute with his own client, as well as with Ricoh's Dr. Soderman, according to Dr. Mitchell, it is the module binder that is used as the component disclosed in the Kowalski References for use in selecting the "hardware cells" to implement the modules identified by the VDAA. (Brothers Dec. Ex. 34, Mitchell Report at 28.) According to Dr. Soderman, however, at most, the module binder merely performs a simple process of matching a hardware cell with a module based on the class type and attribute of the module. (Brothers Dec. Ex. 31, Soderman Rebuttal Report at 19-20.) Nothing in Kowalski85 represents or suggests that the module binder contained any expert knowledge. 10 Id. The fact that hardware cells may ultimately be (somehow) selected in Kowalski85 to implement the VDAA output modules does not convert the VDAA expert rules into the "hardware cell selection rules" required in claim 13 of the '432 patent. Id.

Additionally, Dr. Soderman disputes that "hardware cells" are even stored in the "module database," as believed by Dr. Mitchell. According to Dr. Soderman, there is no technology *specific* information stored in the "module database," as disclosed in the Kowalski References. (Brothers Dec. Ex. 33, Soderman Deposition Tr., Vol. II at 429-430.) Dr. Soderman believes that the information

MEMC Elec., 2006 U.S. Dist. LEXIS 9353, *20 (summary judgment must be support by "facts as would be admissible in evidence.").

10 Defendants Motion cites (but does not provide a supporting claim chart to invalidate any of claims 13-17 of the '432 patent) a refined version of the VDAA system developed by Dr. Kowalski at Bell Labs. In particular, Defendants assert that the "module binder" described in Kowalski85 was refined to select, bind and create a netlist "all in one step." Defendants Motion at 5. There is no citation, however, to any documentation or other specific evidence that describes how the "refined version" was implemented. Indeed, there is no indication in the Motion (or any record evidence) how (if at all) any "refined version" stored and used expert rules to perform "cell selection" as required in claims 13-17 of the '432 patent. Allowing Defendants to rely at this late stage on undocumented (allegedly) prior art should be prohibited. Fed. R. Civ. P. 37(c); *MEMC Elec.*, 2006 U.S. Dist. LEXIS 9353, *20 (summary judgment must be support by "facts as would be admissible in evidence.").

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stored in the module database is merely a place-holder (or "wrapper") used to indicate where "hardware cells" would need to be placed in an implementation of the selected module. *Id.* at 433-434, 439. Dr. Soderman is of the opinion that any element that would actually store the "hardware cells" used to implement the desired module would be stored in a component referred to as the "technology database." Id.

A further dispute regarding the Kowalski References involves the presence in the VDAA system of an "expert system," as that term is defined by the Court. In its Order, the Court defined the claim term "expert system" as "software that solves problems through selective application of rules in the knowledge base." (Brothers Dec. Ex. 28, Claim Construction Order at 17.) According to Dr. Soderman, nothing in the Kowalski References describe how, if at all, the VDAA expert rules are "selectively applied" to solve a problem, as required under the Court's definition of the term "expert" system." Declaration of Donald A. Soderman filed concurrently with this Opposition ("Soderman Declaration") at ¶ 13-14.

Finally, Defendants assert that the "definitions of architecture independent actions and conditions" limitation is met by the use of "predefined operators" in the Kowalski References. Defendants Motion at 5. The Kowalski References do not disclose (or suggest), and Defendants do not elaborate on, how the VDAA system stored such "predefined operators." Defendants simply state that the operators are "predefined," in concluding that the "storing . . . definitions" limitations are met. Defendants Motion at 5.

III. **LEGAL STANDARDS**

Summary judgment is considered a drastic remedy and deprives a party of the right to a jury trial; courts, therefore, apply a strict standard of review. Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 254-55 (1986). Summary judgment may properly be granted only where no genuine issue of material fact exists or where, viewing the evidence and inferences that may be drawn therefrom in the light most

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favorable to the party opposing summary judgment, the movant is clearly entitled to prevail as a matter of law. Fed. R. Civ. P. 56(c) (Summary judgment is granted if there is a showing that "there is no genuine issue as to any material fact and that the moving party is entitled to judgment as a matter of law"); *Anderson*, 477 U.S. at 255 ("The evidence of the nonmovant is to be believed, and all justifiable inferences are to be drawn in his favor."). Summary judgment is "to avoid a clearly unnecessary trial . . . not to substitute lawyers' advocacy for evidence." *Cont'l Can Co. v. Monsanto Co.*, 948 F.2d 1264, 1265 (Fed. Cir. 1991).

There is a high standard for summary judgment motions in patent cases. A patent is presumed to be valid. 35 U.S.C. § 282 (2006) ("A patent shall be presumed valid."). "This presumption only can be overcome by clear and convincing evidence to the contrary." Helifix Ltd. v. Blok-Lok, Ltd., 208 F.3d 1339, 1346 (Fed. Cir. 2000). An invention is anticipated under 35 U.S.C. § 102(b) if it "was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States." 35 U.S.C. § 102(b). "When an asserted prior use is not that of the applicant, § 102(b) is not a bar when that prior use or knowledge is not available to the public." Woodland Trust v. Flowertree Nursery, Inc., 148 F.3d 1368, 1371 (Fed. Cir. 1998). Also, in order to be valid prior art, a reference must be published and known to the public. In re Cronyn, 890 F.2d 1158, 1160 (Fed. Cir. 1989) ("Dissemination and public accessibility are the keys to the legal determination whether a prior art reference was 'published.'"). To be anticipating, a prior art reference must disclose "each and every limitation of the claimed invention[,] ... must be enabling[,] and [must] describe ... [the] claimed invention sufficiently to have placed it in possession of a person of ordinary skill in the field of the invention." Helifix, 208 F.3d at 1346. Summary judgment of invalidity may only be granted if the movant establishes that there were no material facts in dispute related to the movant's assertion of invalidity and also presents clear and convincing evidence showing that the patent is invalid. *Helifix*, 208 F.3d at 1346.

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Summary judgment is improper when there is a conflict between expert opinions; a trial with the refining fire of cross-examination is a more effective means of arriving at a conclusion than perusal of ex parte declarations of experts. Hodosh v. Block Drug Co., 786 F.2d 1136, 1143 (Fed. Cir. 1986); Hilgraeve Corp. v. McAfee Assocs., 224 F.3d 1349, 1352-53 (Fed. Cir. 2000) ("[D]ifferences in the experts' descriptions of [the allegedly infringing program] raise a genuine issue of material fact. The record shows a genuine and material conflict over the [operation of the program] arising from the differing explanations. . . . Moreover the record does not conclusively describe [the operation of the program]. . . . The determination of whether either description (or neither) is correct requires a factual determination of the actual operation of the [program].").

Summary judgment must be supported by "facts as would be admissible in evidence." MEMC Elec. Materials, Inc. v. Mitsubishi Materials Silicon Corp., 2006 U.S. Dist. LEXIS 9353, *20 (N.D. Cal. Feb. 24, 2006) citing Fed. R. Civ. P. 56(e). In deciding on a summary judgment motion, the court may take into account any material that would be admissible or usable at trial, but inadmissible evidence may not be considered. Scosche Indus. v. Visor Gear, 121 F.3d 675, 682 (Fed. Cir. 1997) ("To be acceptable at summary judgment stage, the evidence presented in the affidavit must be evidence that would be admissible if presented at trial through the testimony of the affiant as a sworn witness," quoting 11 James Wm. Moore, Moore's Federal Practice § 56.14[1][d], at 56-162 (3d ed. 1997)) ("Affidavits [that] do not satisfy Rule 56(e) [] must be disregarded") (quoting State Mut. Life Assurance Co. v. Deer Creek Park, 612 F.2d 259, 264-65 (6th Cir. 1979)).

A court may only grant summary judgment if no reasonable jury could agree with the nonmovants' factual contentions. ATD Corp. v. Lydall, Inc., 159 F.3d 534, 540 (Fed. Cir. 1998). Consequently, a district court should approach the fact issues underlying a motion for summary judgment with great care. Amhil Enters. Ltd. v. Wawa, Inc., 81 F.3d 1554, 1557 (Fed. Cir. 1996).

Any doubts, inferences, or issues of credibility must be resolved against the movant. Helifix, 208 F.3d at 1345-46. Additionally, evidence of the non-movant is to believed and all inferences drawn

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in his favor. Anderson, 477 U.S. at 255. Even where the movant can make a prima facie showing by
clear and convincing evidence based on the movant's particular interpretation of the facts, summary
judgment is still improper if there are any genuine issues of material fact. Helifix, 208 F.3d at 1346,
1350 (vacating district court's summary judgment of invalidity due to genuine issues of material fact).
"To overturn a summary judgment, the non-movant need only show that one or more of the facts on
which the district court relied was 'genuinely in dispute' and was material to the judgment." Amini
Innovation Corp. v. Anthony California, Inc., 439 F.3d 1365, 1368 (Fed. Cir. 2006) citing Avia Group
Intern., Inc. v. L.A. Gear California, Inc., 853 F.2d 1557, 1561-62 (Fed. Cir. 1988) citing Anderson, 477
U.S. at 248.

Reliance on the testimony of biased and non-objective witnesses has been criticized by the Federal Circuit, particularly with respect to allegations of public use: "Witnesses whose memories are prodded by the eagerness of interested parties to elicit testimony favorable to themselves are not usually to be depended upon for accurate information." Juicy Whip v. Orange Bang, 292 F.3d 728, 740 (Fed. Cir. 2002) (quoting The Barbed Wire Patent, 143 U.S. 275, 284 (1892)). "Historically, courts have looked with disfavor upon finding anticipation with only oral testimony." Juicy Whip, 292 F.3d at 740; see also Woodland Trust v. Flowertree Nursery, 148 F.3d 1368 (Fed. Cir. 1998) (reversing a finding of prior public knowledge and use based solely on uncorroborated oral testimony).

IV. ARGUMENT

A. Regardless Of The Interpretation of the Term "Hardware Cells" A Material Issue of Fact Remains as to Whether the Kowalski References Anticipate Claims 13-17

Defendants' Motion for Summary Judgment should be denied because under any construction of the term "hardware cells" a material issue of fact exists. 11 Irrespective of whether the

¹¹ If either party fails to request a claim construction hearing, there is a presumption that the meanings of

Court accepts Defendants' overt attempts to limit the claims of the '432 patent to the preferred embodiment disclosed in the patent specification, the issue of whether the prior art anticipates all of the limitations of the claims remains a material issue of fact. The claim charts presented as Exhibits A and B of Defendants' Motion are *not* undisputed (even under Defendants' restrictive view of the term "hardware cells"), ¹² and would not be conclusive as a matter of law. ¹³

1. <u>No Selection of Technology-Specific "Hardware Cells"</u>

The claimed step of selecting "hardware cells" using "expert rules," as recited in claim 13, for example, cannot be met (under any construction of the term "hardware cells") because the Kowalski References 14 do not disclose the selection of technology-*specific* hardware components used to perform the desired functions (e.g., addition) of the circuit under design. As discussed in detail in Ricoh's Opposition to Motion (No. 2), the critical characteristic of a "hardware cell" is its ability to define or describe the technology in which it will be implemented. Soderman Declaration at ¶ 15. Thus, in accordance with the patented invention, the "hardware cells" must define some characteristic of the

Defendants have failed to previously move for a hearing on the term "hardware cells," and thus, should be precluded from seeking one at this late stage.

¹² As noted above, Defendants should be prohibited from relying on the Claim Chart Exhibit A because it proffers new evidence not previously disclosed or relied upon by Defendants validity expert witness Dr. Mitchell. Similarly, Defendants should be prohibited from relying (at this late stage) on Claim Chart Exhibit B because it proffers new evidence not previously relied upon by Dr. Mitchell. Fed. R. Civ. P. 37(c); *MEMC Elec.*, 2006 U.S. Dist. LEXIS 9353, *20 (summary judgment must be support by "facts as would be admissible in evidence.").

¹³ Defendants conceded that it was not presenting any claim chart attempting to map the details of any "publicly used" embodiment of the so-called "VDAA" system on the claims of the '432 patent. Thus, the citation to Exhibit C in Defendants' Motion is in error.

¹⁴ No previous disclosure (or reliance) upon the Kowalski Thesis was previously made (by Defendants or its validity expert witness, Dr. Mitchell) to meet the "hardware cells" limitations. No disclosure was made in Defendants' Initial Invalidity Contentions, Final Invalidity Contentions, Supplemental Final Invalidity Contentions, nor Expert Report of Dr. Mitchell. Any attempts to rely at this late stage on the Kowalski Thesis in this regard, therefore, should be prohibited. Fed. R. Civ. P. 37(c); *MEMC Elec.*, 2006 U.S. Dist. LEXIS 9353, *20 (summary judgment must be support by "facts as would be admissible in evidence.").

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technology to be used in fabrication of the ASIC under design sufficient to allow the "expert rules" to make intelligent decisions in selecting optimum cells (i.e., selecting one cell from the cell library over another cell). Soderman Declaration at ¶ 15. This requirement of a technology-specific cell is the same whether the term "hardware cell" is to be read as a circuit configuration such as an adder circuit (as endorsed by Defendants) or also include "primitives" (i.e., simple, basic Boolean logic gates), as endorsed by Ricoh. 15

The Kowalski References state that any "expert rules" used in the VDAA system select technology-independent functional modules. ¹⁶ See, e.g., Defendants Motion Exhibit 36, Kowalski 85 at 36. ("The DAA produces a technology-independent hardware network. This network is composed of modules, ports, links, and symbolic code. The modules can be registers, operators, memories, and buses or MUXes with input, output, and bidirectional ports.") (emphasis added). Defendants' own expert witness on validity, Dr. Mitchell, readily admits that the modules are technology-independent. (Brothers Dec. Ex. 34, Mitchell Report at 28.) See also (Brothers Dec. Ex. 31, Soderman Rebuttal Report at 19.) It would thus seem clear that there are no "expert rules" used to select anything resembling a technology-specific "hardware cell."

As noted above, Dr. Mitchell contends—contrary to Defendants new assertions—that "hardware cells" are actually selected from the "module database." (Brothers Dec. Ex. 34, Mitchell Report at 28.) Dr. Soderman, however, takes issue with this opinion, noting that the information stored in the module database is merely a place-holder (or "wrapper") used to indicate where "hardware cells"

¹⁵ To be clear, Ricoh's position is that the term "hardware cells" do not exclude the use of primitives. Ricoh does not take the position that the term excludes circuit configurations, as advocated by Defendants, but rather, Ricoh's position is that the term "hardware cells" includes technology-specific circuit configurations, as well as technology-specific primitives.

¹⁶ Indeed, there is a material issue of fact as to whether the selected "modules" can even meet Defendants' definition of a "hardware cell," as the "modules" are not specific circuit configurations (e.g., ripple carry adder, carry look ahead adder, etc.), nor even generic circuit configurations (e.g., adders, etc.). Soderman Declaration at ¶ 12.

would need to be placed in an implementation of the selected module. (Brothers Dec. Ex. 33, Soderman Deposition Tr., Vol. II at 433-434, 439.) Dr. Soderman is of the opinion that any element that would actually store the "hardware cells" used to implement the desired module would be stored in a component referred to as the "technology database." *Id.*

Thus, at the very least, regardless of the precise interpretation of the term "hardware cell," a critical factual dispute exists between Dr. Mitchell and Dr. Soderman, and *even* between Dr. Mitchell and Defendants, as to what components disclosed in the Kowalski References could be used to meet the claimed "hardware cell" limitations. There cannot be any more genuine dispute than one in which opposing party experts, as well as the moving party and its own expert, arrive at completely *different* conclusions. Summary Judgment should certainly be denied for this reason alone. *Hodosh*, 786 F.2d at 1143 (Fed. Cir. 1986) (summary judgment is improper where there is a conflict between experts as to a material fact).

2. <u>No "Selective Application" of "Expert Rules"</u>

The Kowalski References¹⁷ do not disclose how any "expert rules" are applied to select "hardware cells" (using any construction of the term), particularly how the "rules" are "selectively applied" to meet the construction of the term "expert system" as found by the Court in its Claims Construction Order. In its Order, the Court defined the claim term "expert system" as "software that solves problems through selective application of rules in the knowledge base." (Brothers Dec. Ex. 28,



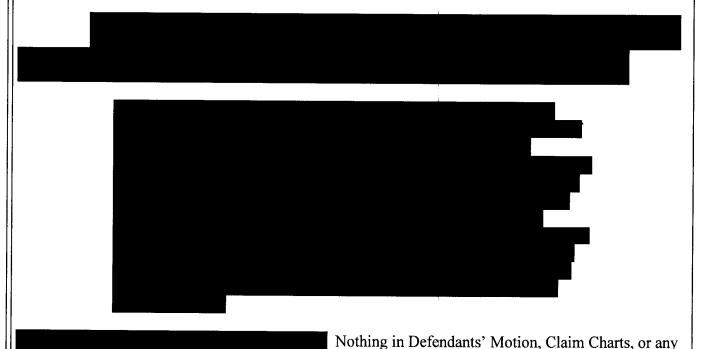
¹⁷ The Kowalski Thesis was not previously disclosed (or relied upon) by Defendants as meeting the "expert system" limitations of claim 13. Any attempts to rely at this late stage on the Kowalski Thesis in this regard, therefore, should be prohibited. Fed. R. Civ. P. 37(c); *MEMC Elec.*, 2006 U.S. Dist. LEXIS 9353, *20 (summary judgment must be support by "facts as would be admissible in evidence.").

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application" of "rules"), thus, remains a material issue of fact to be determined at trial. For at least this reason, Defendants' Motion for Summary Judgment should be denied.

3. No "Library" of "Definitions of Architecture Independent Actions and Conditions"

Defendants rely on "predefined operators" in the VDAA to meet the "definitions of actions and conditions" of claim 13 of the '432 patent. Defendants Motion at 5. Claim 13 requires a step of "storing a set of definitions of architecture independent actions and conditions." The Court construed the phrase "a set of definitions of architecture independent actions and conditions" to mean: "a library of definitions of the different architecture independent actions and conditions that can be selected for use in the desired ASIC." (Brothers Dec. Ex. 28, Claim Construction Order at 13.)



other disclosure establishes how, if possible, the Kowalski References meet Dr. Casavant's interpretation of the term "library" in the context of the claimed step of "storing a set of definitions." In

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15 and 17 under 35 U.S.C. § 112 (¶4)).

²² The only the arguments made in the instant Motion that do not assume Defendants narrow

order to be consistent with its non-infringement position, Defendants must be required to prove in its invalidity position the same limitations it emphasized in its non-infringement position.

Whether the Kowalski References, in fact, anticipate (or render obvious) a "library" used to store "a set of definitions," as required in claim 13 of the '432 patent, therefore, is a material issue of fact that has yet to be determined. Defendants' Motion for Summary Judgment should be denied on this basis alone.

B. Kowalski References Are Only Relied Upon For Invalidity Based On Improper Interpretation of Term "Hardware Cells"

Defendants' Motion for Summary Judgment should be denied because it is based on Defendants' improper interpretation of the term "hardware cell." As indicated in Ricoh's Opposition to Motion (No. 2), Defendants' restrictive interpretation of the term "hardware cells" is based on an inappropriate interpretation of the claims, incorrect reading of the '432 patent specification, and inaccurate reading of the plain language of claim 13.

As shown in Ricoh's Opposition to Motion (No. 2), Defendants' narrow view of the term "hardware cells" is flawed as a matter of law. Because Defendants exclusively rely on such a flawed claim interpretation in challenging claims 13-17 of the '432 patent based on the Kowalski References, ²² Defendants' Motion for Summary Judgment should be denied.

Whether Kowalski References Anticipate "Hardware Cells" (as Properly Construed) C. Remains a Material Issue of Fact

Defendants' Motion for Summary Judgment should be denied because under the proper interpretation of the term "hardware cell" a material issue of fact exists as to whether the Kowalski References anticipate claims 13-17. As described in detail in Ricoh's Opposition To Motion (No. 2), the

interpretation of the term "hardware cells" are at pages 10-11 of Defendants Motion (arguing invalidity based on an (allegedly) publicly known version of the VDAA system; and arguing invalidity of claims

plain and ordinary meaning of the term "hardware cells" requires hardware components that are technology *specific*.

All that is required of a "hardware cell," as that term is used in the '432 patent, is that the hardware component be technology-specific. An example of technology-specific information is some indication of the geometry of the cell in order to define it relative to other technology. Geometrical information may include, for example, one or more characteristics of components in terms such as area, speed, or power. Soderman Declaration at ¶ 18.

Using the proper meaning of the term "hardware cell," it is Ricoh's contention that the Kowalski References fail to disclose (or suggest) the use of "expert rules" in the selection of technology-specific hardware components ("hardware cells"), as required in claim 13. Dr. Soderman, for example, described in detail in his Rebuttal Report that any "rules" found in the VDAA system are merely used to select functional modules that are technology *independent*. (Brothers Dec. Ex. 31, Soderman Rebuttal Report at 19.)

Although Defendants, in its Motion (at 10), allude to some later developed version of VDAA that (allegedly) "clearly met Ricoh's requirement that there be direct selection of gates by rules," no documentary or other evidence of a publicly known or used version of VDAA has ever been produced or even identified.²³ Indeed, Defendants never even provided a claim chart setting forth the details of such a version of VDAA to support its instant Motion for Summary Judgment. *See* (Brothers Dec. Ex.

"Witnesses whose memories are prodded by the eagerness of interested parties to elicit testimony favorable to themselves are not usually to be depended upon for accurate information." *Juicy Whip v. Orange Bang*, 292 F.3d 728, 740 (Fed. Cir. 2002) (quoting *The Barbed Wire Patent*, 143 U.S. 275, 284 (1892)). "Historically, courts have looked with disfavor upon finding anticipation with only oral testimony." *Juicy Whip*, 292 F.3d at 740; see also Woodland Trust v. Flowertree Nursery, 148 F.3d 1368 (Fed. Cir. 1998) (reversing a finding of prior public knowledge and use based solely on uncorroborated oral testimony).

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37, correspondence confirming that no Exhibit C (claim chart for (alleged) publicly used VDAA) was to be served with the Motion for Summary Judgment.) Any attempts to rely on the existence of such prior art without any previously disclosed evidence should be prohibited. Fed. R. Civ. P. 37(c); MEMC Elec., 2006 U.S. Dist. LEXIS 9353, *20 (summary judgment must be support by "facts as would be admissible in evidence."). At the very least, various factual issues remain to be determined: the actual existence of the VDAA system; the date in which the VDAA system became publicly known or used; pertinent details of the components used in the actual VDAA system; the details of how the components operated; etc. No evidence has been identified (e.g., testimony from Defendants' paid witnesses, etc.) clearly and convincingly resolving these material factual issues.

Regardless of whether the Court permits Defendants to rely on its undocumented (alleged) prior art (supported only by oral testimony of a paid witness), the issue whether the Kowalski References (and/or the later version of the VDAA system) in fact meet the limitations of claims 13-17 of the '432 patent, is a material issue of disputed fact that exists sufficient to deny Defendants' Motion for Summary Judgment.

D. Claims 15 and 17 More Specifically Define Scope to Comply with § 112 (¶4)

Defendants' Motion for Summary Judgment regarding claims 15 and 17 should be denied because it is based on the same claim interpretation arguments previously denied by the Court in its Claims Construction Order. As it had argued during the Markman Hearing, Defendants (again) argue that claim 13 requires "data paths" and "control paths" as part of the netlist output from the process recited in claim 13. Defendants Motion at 10. Defendants conclude (at 11) that claims 15 and 17 must be invalid under 35 U.S.C. § 112 (¶4) because the claims respectively add the "data paths" and "control paths" Defendants deem implicit in claim 13.

The flawed logic in this aspect of Defendants' Motion is that the Court has already made clear, when it denied virtually the same argument in its Claims Construction Order, that it finds that the

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claim scope of claims 15 and 17 differs from that of claim 13. As stated in the Claims Construction Order, "The Court also finds that claim 13 does not restrict the interconnection requirements of the hardware cells to 'data and control paths.'" (Brothers Dec. Ex. 28, Claim Construction Order at 24 (emphasis added).) It naturally follows that, because claims 15 and 17, respectively, are restricted to the explicit steps of generating "data paths" and "control paths," claim 13 (which is not so restricted) has a scope that differs from that of claims 15 and 17. See, e.g., LaserMax, Inc. v. Glatter, 2005 U.S. Dist. LEXIS 17136 (S.D.N.Y. Aug. 17, 2005). In LaserMax, a broad claim term "telescope" in an independent claim was deemed further limited (in accordance with section 112 (¶4)) by dependent claims to a "Newtonian telescope" and a "reflecting telescope." Id. at *13-15. The LaserMax court found that, although the term "telescope" overlaps with the term "reflecting telescope," in the dependent claim, the term "reflecting telescope" further limits the claim scope because it more specifically defines the term "telescope" used in the invention. See also Laitram Corp. v. Rexnord, Inc., 939 F.2d 1533, 1538 (Fed. Cir. 1991) (Federal Circuit finding that independent claim reciting a generic means and a dependent claim reciting a specific means did not have exactly the same scope, and that the independent claim literally covers the structure described and equivalents thereof, whereas the dependent claim only literally covers the structure described).

Because both claims 15 and 17 more specifically define the claim scope of claim 13, the limitations added by claims 15 and 17 are not superfluous, as argued by Defendants. No violation of Section 112 (¶4) thus results. Accordingly, Defendants' Motion for Summary Judgment must be denied as being based on a flawed interpretation of the claims of the '432 patent.

V. **CONCLUSION**

For at least the reasons given above, Defendants' Motion for Summary Judgment should be denied.

1 2 3 4 5 Dated: September 1, 2006 6 7 Jeffrey B. Demain, State Bar No. 126715 Jonathan Weissglass, State Bar No. 185008 8 ALTSHULER, BERZON, NUSSBAUM, **RUBIN & DEMAIN** 9 177 Post Street, Suite 300 San Francisco, CA 94108 10 Telephone: (415) 421-7151 Facsimile: (415) 362-8064 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26

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RICOH COMPANY, LTD.

By: /s/ Gary M. Hoffman

Gary M. Hoffman (*Pro Hac Vice*) Kenneth W. Brothers (*Pro Hac Vice*) DICKSTEIN SHAPIRO LLP 1825 Eye Street, NW Washington, DC 20006-1526 Telephone: (202) 420-2200 Facsimile: (202) 420-2201

Edward A. Meilman (*Pro Hac Vice*) DICKSTEIN SHAPIRO LLP 1177 Avenue of the Americas New York, NY 10036-2714 Telephone: (212) 277-6500 Facsimile: (212) 277-6501

Attorneys for RICOH COMPANY, LTD.